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Mr. John Grantham
State of Washington
Department of Ecology
Nuclear & Mixed Waste Program
P. O. Box 47600
Olympia, WA 98504-7600

FLUOR DANIEL, INC.



Date: October 14, 1993

Reference: Hanford Waste Vitrification Plant
DOE Contract DE-AC06-86RL10838
Fluor Contract 8457

Transmittal No.: WDOE- 673

Dear Mr. Grantham:

TRANSMITTALWe enclose 2 copy of the items listed below. These are issued per US-DOE request.Response due to Fluor: N/AResponds to: A170 PACKAGE

NUMBER	REV	DATE	TITLE
DCN - #0102	0	10/07/93	DCN TITLE: TOB OIL TRANSFORMER SPEC REV. "RELEASED FOR CONSTRUCTION"

Reference: FRP-1249, FUP-681

Distribution:

R. L. Long: DOE-RL, w/0

TWP/AME Corresp Cntrl Cntr, MSIN A5-10

(A170 PACKAGE), w/0

P. Felise, WHC-RL (MSIN G6-06), w/1

Environmental Data Management Center

(MSIN H6-08), w/1

D. Duncan, US EPA, Region X, w/0

Very truly yours,

Rosalie Cadenas for
R/S. Poulter
Project Director



RSP:AT:lh

**FLUOR DANIEL**US DEPARTMENT OF ENERGY
HANFORD WASTE VITRIFICATION PLANT**DESIGN CHANGE NOTICE****DCN - 0102**

REV 0

PAGE 1 OF 7

DCN TITLE

TOB Oil Transformer Spec Rev.

DATE INITIATED

8/31/93

PACKAGE NO.

A170

SECTION 1: DESCRIPTION OF CHANGE

Add neutral terminal, ground buses and nameplate to the transformer. Revise data sheets to incorporate the above changes.

CAUSE OF CHANGE:

- ☐ Field Change Request
☐ Supplier Disposition
☐ Deficiency Report
☒ Design Development
☒ Change Request
☐ Other _____

CR-975

Initiating Document(s)

FOR LIST OF AFFECTED DOCUMENTS, SEE SECTIONS 6 AND 7.

SECTION 2: EVALUATION

ARE ANY OF THE FOLLOWING AFFECTED?

IF "YES" REVIEW
REQUIRED BY:REVIEWER
COMMENTS/SIGNATURE/DATE

WAPA

☒ NO ☐ YES

QUALITY LEVEL 1

☒ NO ☐ YES

SAFETY CLASS 1 OR 2

☒ NO ☐ YES

SYSTEMS ANALYSES

☒ NO ☐ YES

MULTI-DISCIPLINE

☒ NO ☐ YES

DCN Evaluated by:

Systems

J. J. Smith

ADM

M. H. 9/1/93

Others

SECTION 3: APPROVED FOR CONSTRUCTION*Albe Salelin*
Originator*9-1-93*
Date*M. H. Fatherston*
Project/Resident Engineer*9/1/93*
Date**SECTION 4: CONCURRENCE**

Edward Jacobs *9-27-93*
Project Management Date

John Smith *9-27-93*
Systems Date

Alvin Yip *9/29/93*
Independent Safety Date

John *9/24/93*
Quality Assurance Date

P. P. Kulowski *9/29/93*
Configuration Management Date

SECTION 5: RELEASED FOR CONSTRUCTIONPE STAMP REQUIRED? ☐ NO ☒ YES*9/1/93*

WHC

Date

*E. D. Thompson**10-6-93*

UCAT

Date

*John R. Nason**10-7-93*

DOE

Date

COMMENTS:



FLUOR DANIEL

US DEPARTMENT OF ENERGY
HANFORD WASTE VITRIFICATION PLANT

DESIGN CHANGE NOTICE

DCN - 0102

REV
0

DISCIPLINE
Electrical

PKG. NO.
A170

PAGE
2

PREPARED BY: P. McCaughey

Date:

DISCIPLINE ENGINEER:

Alfred J. Jelinek

Date: 9-1-93

SECTION 6: CONSTRUCTION DOCUMENTS AFFECTED

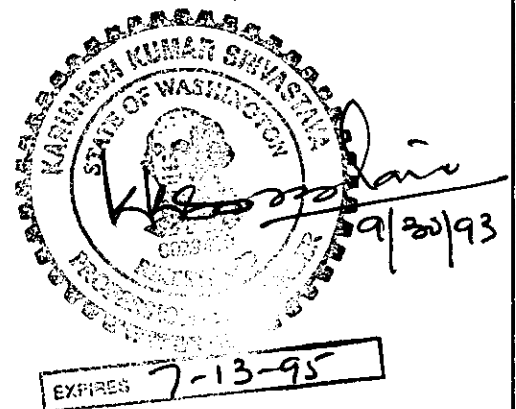
DOCUMENT NUMBER	SHT/ PAGE	REV NO	DOCUMENT NAME	INCLD Y/N	DESCRIPTION OF CHANGE
B-595-C-A170- 16320	4, 5, 6 Attachment A, Page 1 Attachment B, Page 1	0	Pad Mounted Transformer	Y	


SECTION 7: NON-CONSTRUCTION DOCUMENTS AFFECTED

This section references affected items such as P&IDs or calculations/analyses, but they are generally not included in DCN package.

DOCUMENT NUMBER	SHT/ PAGE	REV NO	DOCUMENT NAME	DESCRIPTION OF CHANGE
N/A				

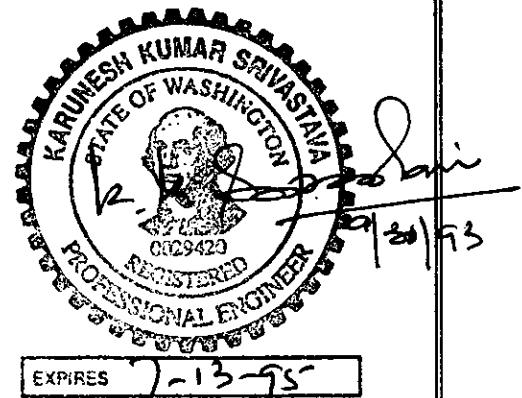
- 2.1.3 The transformer shall be equipped with dead front elbow type lightning arresters. The lightning arresters shall be rated 18 kV, 15.4 kV Maximum Continuous Operating Voltage (MCOV), 95 kV BILB-I.L. and shall be in accordance with NEMA LA-1.
- 2.1.4 Low-voltage secondary terminations shall consist of REA stud type secondary bushings with spade terminals sized to accept up to (3) 750 MCM-kcmil conductors per phase and (3) 750 MCM-kcmil conductors for neutral. The neutral bushing shall be provided with a ground strap for grounding the spade terminal to the tank well. The neutral bushing shall also be provided with spade terminal to accept 1-500 kcmil conductor for grounding. Compression type cable lugs shall be provided for all above conductors.




 FLUOR DANIEL		U.S. DEPARTMENT OF ENERGY HANFORD WASTE VITRIFICATION PLANT		DESIGN CHANGE NOTICE	
DESCRIPTION OF CHANGE Add neutral terminal, ground buses and nameplate to the transformer. Revise data sheets to incorporate the above changes.				BASE DOC. NO. A170-16320	
				SHT/PG. 4 REV. 0	
				DISCIPLINE: Electrical	
PREPARED BY: P. McCaughey		DATE: 8/31/93		REV 0	PAGE 3
DISCIPLINE ENGINEER: <i>Albe Tallei</i>		DATE: 9-1-93			
				DCN - 0102	

2.1.10.2 A permanent stainless steel nameplate shall be located on the inside of the low-voltage compartment door. The nameplate shall be in accordance with NFPA 70 and ANSI C57.12.00, Table 9, Nameplate "C". The nameplate shall also indicate the transformer winding conductor material and transformer serial number.

2.1.10.4 The transformer shall be identified by a permanently attached nameplate showing the equipment number description as shown on Attachment B. The nameplate shall be of laminated black and white plastic arranged to show black engraving on white background, and shall be mounted next to the nameplate covered by Paragraph 2.1.10.2.



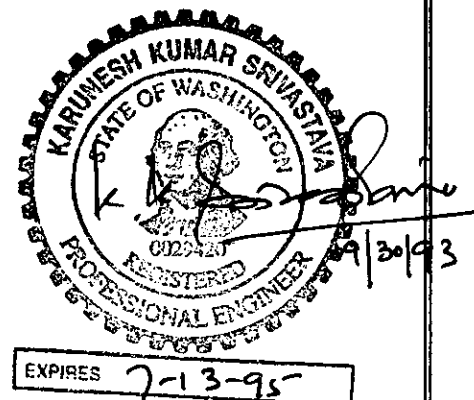
 FLUOR DANIEL		U.S. DEPARTMENT OF ENERGY HANFORD WASTE VITRIFICATION PLANT		DESIGN CHANGE NOTICE		
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				SHT/PG. 5 REV. 0		
				DISCIPLINE: Electrical		
PREPARED BY: P. McCaughey		DATE: 8/31/93		DCN - 0102	REV 0	PAGE 4
DISCIPLINE ENGINEER: <i>Abu Talebi</i>		DATE: 9-1-93				


2.1.12.8 Equipment ground bus shall be provided in the high voltage and low voltage compartments. Equipment ground lugs located in the low voltage and high voltage compartments sized to accept up to a #4/0 AWG bare copper stranded conductor.

2.1.12.8.1 Ground bus section in the high voltage compartment shall have provisions for terminating 1-#6, 1-500 kcmil and 1-#4/0 copper ground conductors.

2.1.12.8.2 Ground bus section in the low voltage compartment shall have provisions for terminating 4-#4/0 and 1-500 kcmil copper ground conductors.

2.1.12.8.3 Compression type cable lugs shall be provided for all above ground conductors.



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				DISCIPLINE: Electrical	
PREPARED BY: P. McCaughey		DATE: 8/31/93		DCN - 0102	
DISCIPLINE ENGINEER: <i>Alie Tallein</i>		DATE: 9-1-93			
				REV 0	PAGE 5

9513336.1593

ATTACHMENT A
DATA SHEET DS-1

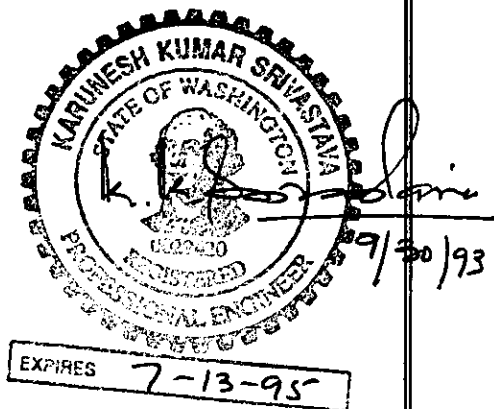
E. Low Voltage Terminations


4. Incoming Conduits Size = 5" 6"
 No. = 5

5. Cable Terminations No. Per Phase ϕ = 3
 (Including Neutral) Cable Size (kcmil) = 750

F. High Voltage Terminations

10. Cable Terminations No. Per Phase ϕ = 1
 Cable Size = #1/0



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PREPARED BY: P. McCaughey		DATE: 8/31/93		DCN - 0102	REV 0	PAGE 6
DISCIPLINE ENGINEER: <i>Albe Saleh</i>		DATE: 9-1-93				

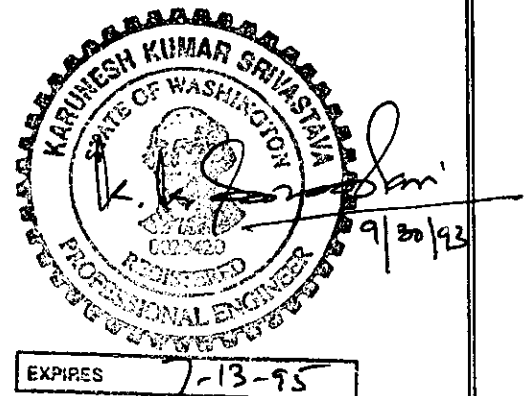
ATTACHMENT B


POWER TRANSFORMER
XT - 32A - 099

Lettering Size 7/16"

Nameplate Size 8"X1-1/2"

SAMPLE NAMEPLATES
NOT TO SCALE



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PREPARED BY: P. McCaughey		DATE: 8/31/93		DCN - 0102	REV 0	PAGE 7
DISCIPLINE ENGINEER: <i>Alire Salehi</i>		DATE: 9-1-93				